



## SEQUENCE LISTING

<110> Hedley, Mary Lynne

<120> METHODS OF TREATING BLADDER DISORDERS

<130> 08191-022001

<140> 10/074,956

<141> 2002-02-12

<150> 60/268,175

<151> 2001-02-12

<160> 29

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 19

<212> DNA

<213> Homo sapiens

<400> 1

tccatgtcgc tctgatgct

19

<210> 2

<211> 20

<212> DNA

<213> Homo sapiens

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tccatgtcgt tcctgatgct

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<210> 3

<211> 24

<212> DNA

<213> Homo sapiens

<400> 3

tcgtcggtttt gtcgttttgt cggt

24

<210> 4

<211> 13

<212> PRT

<213> Homo sapiens

<400> 4

Ser Tyr Ser Met Glu His Phe Arg Trp Gly Lys Pro Val

1

5

10

<210> 5

<211> 3

<212> PRT

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<213> Homo sapiens

<400> 5

Lys Pro Val

1

<210> 6

<211> 5

<212> PRT

<213> Homo sapiens

<400> 6

Glu His Phe Arg Trp

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<210> 7

<211> 52

<212> PRT

<213> Homo sapiens

<400> 7

Met Pro Arg Ser Cys Cys Ser Arg Ser Gly Ala Leu Leu Leu Ala Leu

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5

10

15

Leu Leu Gln Ala Ser Met Glu Val Arg Gly Trp Cys Leu Glu Ser Ser

20

25

30

Gln Cys Gln Asp Leu Thr Thr Glu Ser Asn Leu Leu Glu Cys Ile Arg

35

40

45

Ala Cys Lys Pro

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<210> 8

<211> 70

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated peptide

<400> 8

Met Pro Arg Ser Cys Cys Ser Arg Ser Gly Ala Leu Leu Leu Ala Leu

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5

10

15

Leu Leu Gln Ala Ser Met Glu Val Arg Gly Trp Cys Leu Glu Ser Ser

20

25

30

Gln Cys Gln Asp Leu Thr Thr Glu Ser Asn Leu Leu Glu Cys Ile Arg

35

40

45

Ala Cys Lys Pro Arg Glu Gly Lys Arg Ser Tyr Ser Met Glu His Phe

50

55

60

Arg Trp Gly Lys Pro Val

65

70

<210> 9

<211> 26

<212> PRT

<213> Homo sapiens

<400> 9

Met Pro Arg Ser Cys Cys Ser Arg Ser Gly Ala Leu Leu Leu Ala Leu

1                    5                    10                    15  
 Leu Leu Gln Ala Ser Met Glu Val Arg Gly  
                   20                    25

<210> 10  
 <211> 25  
 <212> PRT  
 <213> Homo sapiens

<400> 10  
 Met Ala Ile Ser Gly Val Pro Val Leu Gly Phe Phe Ile Ile Ala Val  
   1                    5                    10                    15  
 Leu Met Ser Ala Gln Glu Ser Trp Ala  
                   20                    25

<210> 11  
 <211> 26  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
 Trp Cys Leu Glu Ser Ser Gln Cys Gln Asp Leu Thr Thr Glu Ser Asn  
   1                    5                    10                    15  
 Leu Leu Glu Cys Ile Arg Ala Cys Lys Pro  
                   20                    25

<210> 12  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 12  
 Lys Phe Glu Arg Gln  
   1                    5

<210> 13  
 <211> 5  
 <212> PRT  
 <213> Homo sapiens

<400> 13  
 Gln Arg Glu Phe Lys  
   1                    5

<210> 14  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Linker sequence

<400> 14  
 Gly Gly Val Gly Gly  
   1                    5

<210> 15

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<211> 247
<212> DNA
<213> Artificial Sequence
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$\langle 220 \rangle$   
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<223> Synthetic construct

[illegible]

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<210> 16
<211> 10
<212> PRT
<213> Homo sapiens
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<400> 16
Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1             5             10
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<210> 17
<211> 11
<212> PRT
<213> Homo sapiens
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<400> 17  
Gly Gly Gly Gly Ser Gly Gly Gly Gly Gly Ser  
1 5 10

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<210> 18
<211> 20
<212> PRT
<213> Homo sapiens
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<400> 18

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser  
 1 5 10 15  
 Gly Gly Gly Gly  
 20

<210> 19  
 <211> 17  
 <212> PRT  
 <213> Homo sapiens

<400> 19  
 Ser Ser Ser Ser Gly Ser Ser Ser Ser Gly Ser Ser Ser Ser Gly Ser  
 1 5 10 15  
 Pro

<210> 20  
 <211> 18  
 <212> PRT  
 <213> Mus musculus

<400> 20  
 Met Lys Trp Val Thr Phe Leu Leu Leu Leu Phe Val Ser Gly Ser Ala  
 1 5 10 15  
 Phe Ser

<210> 21  
 <211> 18  
 <212> PRT  
 <213> Homo sapiens

<400> 21  
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
 1 5 10 15  
 Tyr Ser

<210> 22  
 <211> 6  
 <212> PRT  
 <213> Homo sapiens

<400> 22  
 Arg Gly Val Phe Arg Arg  
 1 5

<210> 23  
 <211> 195  
 <212> PRT  
 <213> Mus musculus

<400> 23  
 Glu Ala His Lys Ser Glu Ile Ala His Arg Tyr Asn Asp Leu Gly Glu  
 1 5 10 15  
 Gln His Phe Lys Gly Leu Val Leu Ile Ala Phe Ser Gln Tyr Leu Gln  
 20 25 30

```

Lys Cys Ser Tyr Asp Glu His Ala Lys Leu Val Gln Glu Val Thr Asp
    35              40              45
Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Ala Asn Cys Asp Lys
    50              55              60
Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Ala Ile Pro Asn Leu
    65              70              75              80
Arg Glu Asn Tyr Gly Glu Leu Ala Asp Cys Cys Thr Lys Gln Glu Pro
    85              90              95
Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Ser Leu
    100             105             110
Pro Pro Phe Glu Arg Pro Glu Ala Glu Ala Met Cys Thr Ser Phe Lys
    115             120             125
Glu Asn Pro Thr Thr Phe Met Gly His Tyr Leu His Glu Val Ala Arg
    130             135             140
Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Tyr Tyr Ala Glu Gln
    145             150             155             160
Tyr Asn Glu Ile Leu Thr Gln Cys Cys Ala Glu Ala Asp Lys Glu Ser
    165             170             175
Cys Leu Thr Pro Lys Leu Asp Gly Val Lys Glu Lys Ala Leu Val Ser
    180             185             190
Ser Val Arg
    195

```

```

<210> 24
<211> 195
<212> PRT
<213> Homo sapiens

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<400> 24
Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
  1      5      10      15
Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
    20      25      30
Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
    35      40      45
Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
    50      55      60
Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
    65      70      75      80
Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
    85      90      95
Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
    100     105     110
Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
    115     120     125
Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
    130     135     140
Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
    145     150     155     160
Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
    165     170     175
Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
    180     185     190
Ser Ala Lys
    195

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<210> 25

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<211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Linker sequence

<400> 25  
 Gly Gly Tyr Gly Gly  
 1 5

<210> 26  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Furin site

<400> 26  
 Arg Ile Arg Arg  
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<210> 27  
 <211> 241  
 <212> PRT  
 <213> Homo sapiens

<400> 27  
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
 1 5 10 15  
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala  
 20 25 30  
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu  
 35 40 45  
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
 50 55 60  
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
 65 70 75 80  
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
 85 90 95  
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala  
 100 105 110  
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
 115 120 125  
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val  
 130 135 140  
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys  
 145 150 155 160  
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
 165 170 175  
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys  
 180 185 190  
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu  
 195 200 205  
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gly Tyr Gly Gly  
 210 215 220

Arg Ile Arg Arg Ser Tyr Ser Met Glu His Phe Arg Trp Gly Lys Pro  
 225 230 235 240  
 Val

<210> 28  
 <211> 268  
 <212> PRT  
 <213> Homo sapiens

<400> 28

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala  
 1 5 10 15  
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala  
 20 25 30  
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu  
 35 40 45  
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val  
 50 55 60  
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp  
 65 70 75 80  
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp  
 85 90 95  
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala  
 100 105 110  
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln  
 115 120 125  
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val  
 130 135 140  
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys  
 145 150 155 160  
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro  
 165 170 175  
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys  
 180 185 190  
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu  
 195 200 205  
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gly Gly Tyr Gly Gly  
 210 215 220  
 Arg Ile Arg Arg Ser Tyr Ser Met Glu His Phe Arg Trp Asp Glu Gly  
 225 230 235 240  
 Lys Ala Ser Ser Ala Lys Gly Gly Tyr Gly Gly Arg Ile Arg Arg Ser  
 245 250 255  
 Tyr Ser Met Glu His Phe Arg Trp Gly Lys Pro Val  
 260 265

<210> 29  
 <211> 241  
 <212> PRT  
 <213> Mus musculus

<400> 29

Met Lys Trp Val Thr Phe Leu Leu Leu Leu Phe Val Ser Gly Ser Ala  
 1 5 10 15  
 Phe Ser Arg Gly Val Phe Arg Arg Glu Ala His Lys Ser Glu Ile Ala  
 20 25 30  
 His Arg Tyr Asn Asp Leu Gly Glu Gln His Phe Lys Gly Leu Val Leu



Val